



Topic Brief: Microwave Radiation

Date: 6/8/2022

Nomination Number: 0997

Purpose: This document summarizes the information addressing a nomination submitted on May 30, 2022, through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

Issue: The nominator of this topic would like to develop diagnostic/forensic tests that identify biomarkers expressed after exposure to microwave radiation for prolonged periods of time.

Findings: The EPC program develops systematic reviews to inform healthcare decision-making by clinical professional groups, clinicians, healthcare organizations, patients, and others. The EPC Program does not conduct primary research nor participate in the development of medical devices and/or diagnostic tests, therefore the program will not consider this topic further.

Background

Microwaves are a form of electromagnetic radiation, meaning that they are waves of electrical and magnetic energy that move together through space. The spectrum of electromagnetic radiation spans from very long radio waves to very short gamma rays. Lower frequency, lower-energy electromagnetic radiation, like microwave radiation, is nonionizing and higher frequency, high energy electromagnetic radiation is ionizing. Microwaves are used in many aspects of our lives, from sending phone and television communications, to cooking food on an industrial scale and in homes.¹

According to the United States Department of Labor's Occupational Safety and Health Administration (OSHA), there has been "considerable discussion and concern about the possible hazards" of both radiofrequency and microwave radiation, and research about the topic is ongoing in multiple countries. However, OSHA additionally notes that "none of the research [conducted thus far] has conclusively proven that low-level [radio frequency/microwave] radiation causes adverse health effects."²

References

1. United States Food and Drug Administration. Microwave Oven Radiation. 2017. https://www.fda.gov/radiation-emitting-products/resources-you-radiation-emitting-products/microwave-oven-radiation#What_is_Microwave_Radiation . Accessed on 06/08 2022.

2. United States Department of Labor, Occupational Safety and Health Administration. Radiofrequency and Microwave Radiation. <https://www.osha.gov/radiofrequency-and-microwave-radiation/hazards-solutions>. Accessed on 06/08 2022.

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Conflict of Interest: None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

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